CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made. The claims have been amended as follows:

1. **(Currently Amended)** A method of processing a database service query, comprising:

receiving a service query,

obtaining a sum of terms associated with the service query by expanding at least one nested term into one or more un-nested terms,

evaluating the sum of terms as a plurality of SQL instructions**, wherein the sum of terms comprises one or more positive terms and one or more negative terms**,

determining a plurality of results associated with the sum of terms, **wherein the determination comprises:**

collecting, into a first list, results associated with the one or more negative terms, and

collecting, into a second list, results associated with the one or more positive terms while omitting from the second list any results that are in the first list. ~~and~~

~~deleting or disregarding at least one duplicate result associated with the sum of terms.~~

2. **(Original)** The method as claimed in claim 1, further comprising expanding each term to remove NOT operators.

3. **(Original)** The method as claimed in claim 2, wherein the sum of terms are expanded using Boolean logic.

4. **(Original)** The method as claimed in claim 1, in which the service query is an X.500 or LDAP service query.

5. **(Original)** The method as claimed in claim 1, in which the service query is a search service query.

6.   **(Withdrawn)** A method of processing a database service query, comprising:

determining a SQL instruction representative of a function;

listing the results of a subtracted SQL instruction in a first list, listing the results of a non-subtracted SQL instruction in a second list; and

not listing results which are duplicates of previously listed subtracted or non-subtracted results.

7.   **(Withdrawn)** The method as claimed in claim 6, in which the service query is an X.500 or LDAP query.

8.   **(Withdrawn)** The method as claimed in claim 6, in which the service query is a search service query.

9. **(Currently Amended)** A system for processing a directory service query, comprising:

a database using a plurality of tables, each table having a plurality of rows and columns, and storing arbitrary data; and

means for processing a service query by:

obtaining a sum of terms by expanding at least one nested term into one or more un-nested terms,

evaluating the sum of terms as a plurality of SQL instructions**, wherein the sum of terms comprises one or more positive terms and one or more negative terms**,

determining a plurality of results associated with the sum of terms, **wherein the determination comprises:**

collecting, into a first list, results associated with the one or more negative terms, and

collecting, into a second list, results associated with the one or more positive terms while omitting from the second list any results that are in the first list.

~~and~~

~~deleting or disregarding at least one duplicate result associated with the sum of terms.~~

10. **(Previously Presented)** The directory service arrangement as claimed in claim 9, further comprising means to perform X.500 or LDAP services.

11. **(Withdrawn)** A directory service arrangement comprising:

a database using a plurality of tables, each table having a plurality of rows and columns, and storing arbitrary data, and

means for processing a service query by determining a SQL instruction representative of a function, listing the results of a subtracted SQL instruction in a first list, listing the results of a non-subtracted SQL instruction in a second list, and not listing results which are duplicates of previously listed subtracted or non-subtracted results.

12.   **(Withdrawn)** The directory service arrangement as claimed in claim 11, further comprising means to perform X.500 or LDAP services.

13.   **(Withdrawn)** A method for processing a database service query, comprising:
translating a service query to an expression;
simplifying the expression to a number of smaller expressions, each smaller expression being capable of being flattened;

       flattening each smaller expression; and

       executing each flattened expression.

14.   **(Currently Amended)** A method of processing a directory service query, comprising:

       receiving a directory service query,

       obtaining a sum of terms by expanding at least one nested term into one or more un-nested terms,

       mapping the sum of terms to a plurality of SQL instructions**, wherein the sum of terms comprises one or more positive terms and one or more negative terms,**

       determining a plurality of results associated with the sum of terms, **wherein the determination comprises:**

              collecting, into a first list, results associated with the one or more negative terms, and

              collecting, into a second list, results associated with the one or more positive terms while omitting from the second list any results that are in the first list.

       ~~and~~

       ~~deleting or disregarding at least one duplicate result associated with the sum of terms.~~

15.   **(Previously Presented)** The method as claimed in claim 14, further comprising expanding each term to remove NOT operators.

16.   **(Original)** The method as claimed in claim 15, wherein the sum of terms are expanded using Boolean logic.

17.   **(Previously Presented)** The method as claimed in claim 14, in which the service query is an X.500 or LDAP service query.

18.   **(Previously Presented)** The method as claimed in claim 14, in which the service query is a search service query.

19.   **(Withdrawn)** A method of processing a directory service query, comprising:

determining a SQL instruction representative of the directory service query;

listing the results of a subtracted SQL instruction in a first list, listing the results of a non-subtracted SQL instruction in a second list; and

not listing results which are duplicates of previously listed subtracted or non-subtracted results.

20.   **(Withdrawn)** The method as claimed in claim 19, in which the service query is an X.500 or LDAP query.

21.   **(Withdrawn)** The method as claimed in claim 19, in which the service query is a search service query.

22.   **(Currently Amended)** A system for processing a directory service query, comprising:

a database using a plurality of tables, each table having a plurality of rows and columns, and storing arbitrary data; and

means for processing a directory service query by:

obtaining a sum of terms by expanding at least one nested term into one or more un-nested terms,

mapping the sum of terms to a plurality of SQL instructions, **wherein the sum of terms comprises one or more positive terms and one or more negative terms,**

determining a plurality of results associated with the sum of terms, **wherein the determination comprises:**

collecting, into a first list, results associated with the one or more negative terms, and

collecting, into a second list, results associated with the one or more positive terms while omitting from the second list any results that are in the first list.

~~and~~

~~deleting or disregarding at least one duplicate result associated with the sum of~~ ~~terms.~~

23.   **(Previously Presented)** The directory service arrangement as claimed in claim 22, further comprising means to perform X.500 or LDAP services.

24.   **(Withdrawn)** A directory service arrangement comprising:

a database using a plurality of tables, each table having a plurality of rows and columns, and storing arbitrary data, and

means for processing a directory service query by determining a SQL instruction representative of the directory service query, listing the results of a subtracted SQL instruction in a first list, listing the results of a non-subtracted SQL instruction in a second list, and not listing results which are duplicates of previously listed subtracted or non-subtracted results.

25.   **(Withdrawn)** The directory service arrangement as claimed in claim 24, further comprising means to perform X.500 or LDAP services.

26.   **(Withdrawn)** A method for processing a directory service query, comprising:

translating a directory service query to an expression;

simplifying the expression to a number of smaller expressions, each smaller expression being capable of being flattened;

flattening each smaller expression; and

executing each flattened expression.

27.   **(Previously Presented)** The method of claim 1 wherein:

evaluating the sum of terms comprises converting the sum of terms to a plurality of SQL instructions comprising at least one negative term;

and further comprising:

subtracting at least one result associated with the at least one negative term.

28.   **(Previously Presented)** The method of claim 1, wherein obtaining a sum of terms comprises:

identifying at least one term associated with at least one NOT operator; and

expanding the at least one term associated with the at least one NOT operator into at least one negative term.

29.   **(Currently Amended)** The method of claim 1, wherein:

if the service query comprises a term having at least two NOT operators, deleting or disregarding **from the sum of terms** a third-order term corresponding to the term having at least two NOT operators.

30.   **(Previously Presented)** The method of claim 1, wherein obtaining a sum of terms comprises:

identifying at least one term associated with at least one NOT operator; and

expanding the at least one term associated with at least one NOT operator into at least one negative term and at least one positive term.

31.   (Currently Amended) ~~The method of claim 30, further~~ **A method of processing a database service query,** comprising:

receiving a service query;

obtaining a sum of terms associated with the service query by:

expanding at least one nested term into one or more un-nested terms;

expanding at least one term associated with at least one NOT operator into at least one negative term and at least one positive term; and

if the service query comprises a term having at least two NOT operators, deleting from the sum of terms a third-order term corresponding to the term having at least two NOT operators;

evaluating the sum of terms as a plurality of SQL instructions;

obtaining a plurality of results wherein each term **of the sum of terms** is associated with one or more results;

generating a first list comprising one or more results associated with the at least one negative term;

generating a second list comprising one or more results associated with the at least one positive term; and

removing or omitting from the second list one or more results associated with the at least one negative term.